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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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H04N 7/14

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(71) Applicant *(for all designated States except US)*: SORENSON VISION, INC. [US/US]; 1011 West 400 North, Logan, UT 84321 (US).

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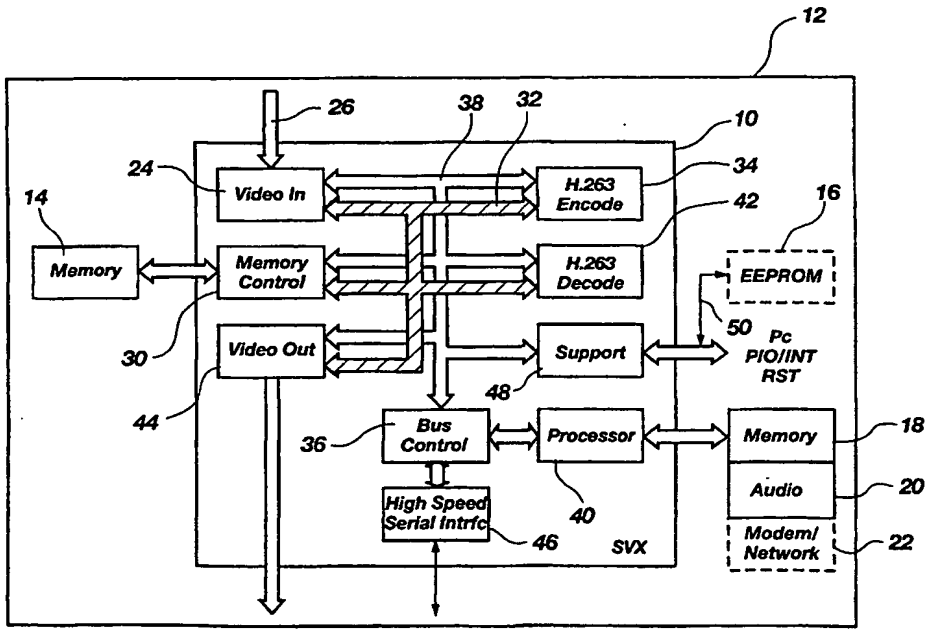
(81) Designated States: AU, CA, IL, JP, KR, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.

(54) Title: VIDEO CONFERENCING INTERFACE



(57) Abstract

A video conferencing circuit (12) is configured to receive an input (26) from one of a plurality of video input devices. The video signal is then stored, compressed and transmitted by an interface circuit such as a modem (18). Video signals from a remote location are received from the modem (18), decompressed, stored and then transferred for display on one of a plurality of video output devices.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/16995

A. CLASSIFICATION OF SUBJECT MATTER
IPC(6) :H04N 7/14
US CL :348/15
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 348/15, 348/14, 709/204,709/205, 345/1, 345/329, 345/330, 379/93.17, 379/93.21

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 5,825,408 A (YUYAMA et al.) 20 OCTOBER 1998, fig. 10, col. 12 lines 23-67, col. 13 kines 1-67, col. 14 lines 1-67, col. 15 lines 1-67, col. 16 lines 1-67, col. 17 lines 1-58.	1-20
Y	US 5,539,452 A (BUSH et al.) 23 JULY 1996, fig. 1, see abstract	1-20
Y	JP401252087 A (NAKAJIMA) 06 OCTOBER 1989, fig. 1, see abstract.	11-21
Y,E	US 5,949,474 A (GERSZBERG et al.) 07 SEPTEMBER 1999, FIG. 2, col. 5 lines 5-9	4, 14
Y,P	US 5,926,208 A (NOONEN et al.) 20 July 1999, fig. 15D, col. 21 lines 15-43	7, 16

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search	Date of mailing of the international search report
17 SEPTEMBER 1999	28 OCT 1999
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer CURTIS A. KUNTZ Telephone No. (703) 305-3230

Form PCT/ISA/210 (second sheet)(July 1992) ★

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
United States Patent and Trademark Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 18 April 2000 (18.04.00)	
International application No. PCT/US99/16995	**Applicant's or agent's file reference** 3750.1PCT
International filing date (day/month/year) 27 July 1999 (27.07.99)	**Priority date** (day/month/year) 30 July 1998 (30.07.98)
Applicant JEWELL, Douglas, L. et al	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

24 February 2000 (24.02.00)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO **34, chemin des Colombettes** **1211 Geneva 20, Switzerland**	Authorized officer R. Forax
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 3750.1PCT	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US99/16995	International filing date *(day/month/year)* 27 JULY 1999	Priority date *(day/month/year)* 30 JULY 1998
International Patent Classification (IPC) or national classification and IPC IPC(7): H04N 7/14 and US Cl.: 348/15		
Applicant SORENSON VISION, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets.

   ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

   I ☒ Basis of the report

   II ☐ Priority

   III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability

   IV ☐ Lack of unity of invention

   V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   VI ☐ Certain documents cited

   VII ☐ Certain defects in the international application

   VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
24 FEBRUARY 2000	10 NOVEMBER 2000
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer MELUR RAMAKRISHNAIAH Telephone No. (703) 305-1461

Form PCT/IPEA/409 (cover sheet) (July 1998) ★

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/16995

I. Basis of the report

1. With regard to the elements of the international application:*

[X] the international application as originally filed

[X] the description:
pages 1-9 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

[X] the claims:
pages 10-17 , as originally filed
pages NONE , as amended (together with any statement) under Article 19
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

[X] the drawings:
pages 1-7 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

[X] the sequence listing part of the description:
pages NONE , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

[ ] the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

[ ] the language of publication of the international application (under Rule 48.3(b)).

[ ] the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

[ ] contained in the international application in printed form.

[ ] filed together with the international application in computer readable form.

[ ] furnished subsequently to this Authority in written form.

[ ] furnished subsequently to this Authority in computer readable form.

[ ] The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

[ ] The statement that the information recorded in computer readable form is identical to the writen sequence listing has been furnished.

4. [X] The amendments have resulted in the cancellation of:

[X] the description, pages NONE

[X] the claims, Nos. NONE

[X] the drawings, sheets/~~fig~~ NONE

5. [ ] This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

***Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/16995

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)	Claims	1-24	YES
	Claims	NONE	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-24	NO
Industrial Applicability (IA)	Claims	1-24	YES
	Claims	NONE	NO

2. citations and explanations (Rule 70.7)

Claims 1-3, 5-6, 7-10, 11-13, 15-16, 17-20, 21, 22-24 lack an inventive step under PCT Article 33(3) as being obvious over Bush et al. (US PAT: 5,539,452, hereinafter Bush) in view of Nakajima (JP401252087A).

Regarding claims 1, 11, 21, 22, Bush discloses video telephone system comprising: video input means (132) (fig. 1), a remote interface circuit (372) (fig. 5), a video output device (664) (fig. 2), an application specific integrated circuit (ASIC) connected to the video input means, to video output device and to remote interface device, the ASIC having: a video-in circuit connected to the video input device from one of the plurality of video signal generating devices (col. 4 lines 39-67, col. 5 lines 1-10), a memory circuit (172, 244) (fig. 1), data compression circuit (180) (fig. 1) means connected to the memory circuit to receive stored data and compress the stored data, video processing means (248) (fig. 1) connected to receive the outgoing compressed data and connected to the remote interface unit to transmit outgoing compressed data, video decompression means (520,712) (fig. 2)connected to video processing means to receive the incoming compressed data and configured to decompress and to transmit incoming compressed data to the memory circuit, video image output means (664) (fig. 2) connected to receive incoming stored data from the memory circuit and to transmit the incoming stored data to a display device (664) (figs. 1-2, col. 11 lines 14-67, col. 12 lines 1-67, col. 13 lines 1-67, col. 14 lines 1-67, col. 15 lines 1-18).

Bush differs from the claimed invention by not showing plurality of input devices and output devices.

However, Nakajima discloses picture displaying system which teaches plurality of input devices (1a,1b) and output devices (7a,7b) (fig. 1 see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Bush's system to provide for plurality of input devices and output devices as this would facilitate displaying abundant in presence in video conference as taught by Nakajima.

(Continued on Supplemental Sheet.)

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

Regarding claims 2-3, 5-6, 7-10, 12-13, 15-16, 17-20, 23-24, Bush further teaches the following: remote interface device (372) (fig. 5) includes a modem (col. 19 lines 49-55), memory circuit (112, 244) includes a memory structure and memory control circuit, video input means includes a video decoder circuit (500,520) (fig. 2), control register connected to video processing means to receive control signals therefrom and input configuration circuit to input control signals to cause input configuration circuit to operate to supply one of the plurality of video input signals (col. 5 lines 17-67, col. 6 lines 1-9), a decimation circuit (reads on 156) (fig. 3) which operates to reduce the density of the output signal and is connected to buffer (172) (fig. 3) to store and transmit an output video (col. 12 lines 58-64), databus for interconnecting various devices (see figs 1-6), bus control circuit includes a bone interface circuit being configured to generate and supply the control signals (col. 6 lines 3-9), video processor means (248) includes a data processor, a memory control sequencer (col. 5 lines 17-19), a line buffer (288, 326) (fig. 1) being configured to receive incoming stored data from the memory control sequencer, an interpolator circuit (reads on 340) (fig. 1) connected to the line buffer to receive the video output signal and generate a an interpolated signal (col. 18 lines 36-64), a buffer (324) (fig. 1), a control register connected to the databus to receive control signaled (col. 6 lines 3-9), an encoder (368) (fig. 1) connected to the buffer to receive the interpolated video signal.

Bush differs from the claimed invention by not showing plurality of input devices and output devices.

However, Nakajima discloses picture displaying system which teaches plurality of input devices (1a,1b) and output devices (7a,7b) (fig. 1 see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Bush's system to provide for plurality of input devices and output devices as this would facilitate displaying images abundant in presence in video conference as taught by Nakajima.

Claims 4, 14, lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Aoki et al. (JP408307514A, hereinafter Aoki).

Regarding claims 4, 14, the combination does not teach that memory structure is a DRAM configured to receive and store data.

However, Aoki discloses communication equipment that teaches about use of DRAM (34) (fig. 1) to store data (fig. 1, see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for memory structure that is a DRAM configured to receive and store data as this would enable storing more data which results in economy of implementation.

---------- NEW CITATIONS ----------

JP408307514A (AOKI) 22 NOVEMBER 1996 (FIG. 1, see abstract).

U.S. APPLICATION NO (if known, see 37 CFR 1.5) 09/762074	INTERNATIONAL APPLICATION NO PCT/US99/16995	ATTORNEY'S DOCKET NUMBER 2206-3750.1US

7. ☐ The following fees are submitted:	CALCULATIONS PTO USE ONLY
BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :	
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO **$1000.00**	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO **$860.00**	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO **$710.00**	
International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) **$690.00**	
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) **$100.00**	
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 690.00
Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	- 20 =		X $18.00	$ 72.00
Independent claims	- 3 =		X $80.00	$ 80.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ $270.00	$
TOTAL OF ABOVE CALCULATIONS =				$
☒ Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				$ 421.00
SUBTOTAL =				$ 421.00
Processing fee of **$130.00** for furnishing the English translation later than ☐20 ☐30 months from the earliest claimed priority date (37 CFR 1.492(f)). +				$
TOTAL NATIONAL FEE =				$ 421.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property +				$ 40.00
TOTAL FEES ENCLOSED =				$ 461.00
			Amount to be refunded:	$
			charged:	$

a. ☒ ~~A check~~ in the amount of $ 461.00 to cover the above fees is enclosed.
Checks

b. ☐ Please charge my Deposit Account No. _____ in the amount of $_____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 20-1469. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Laurence B. Bond
TraskBritt
P. O. Box 2550
Salt Lake City, UT 84110

SIGNATURE:

NAME
Laurence B. Bond

REGISTRATION NUMBER
30,549

09/762079
0500

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 3750.1PCT	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US99/16995	International filing date *(day/month/year)* 27 JULY 1999	Priority date *(day/month/year)* 30 JULY 1998
International Patent Classification (IPC) or national classification and IPC IPC(7): H04N 7/14 and US Cl.: 348/15		
Applicant SORENSON VISION, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets.

   [K] This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I [X] Basis of the report
- II [ ] Priority
- III [ ] Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV [ ] Lack of unity of invention
- V [X] Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI [ ] Certain documents cited
- VII [ ] Certain defects in the international application
- VIII [ ] Certain observations on the international application

Date of submission of the demand	Date of completion of this report
24 FEBRUARY 2000	10 NOVEMBER 2000
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer CURTIS KUNTZ Eugenia Zagan Telephone No. (703) 305-4708

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US99/16995

I. Basis of the report

1. With regard to the **elements** of the international application:*

☐ the international application as originally filed

☒ the description:
pages (See Attached) , as originally filed
pages _____ , filed with the demand
pages _____ , filed with the letter of _____

☒ the claims:
pages (See Attached) , as originally filed
pages _____ , as amended (together with any statement) under Article 19
pages _____ , filed with the demand
pages _____ , filed with the letter of _____

☒ the drawings:
pages (See Attached) , as originally filed
pages _____ , filed with the demand
pages _____ , filed with the letter of _____

☒ the sequence listing part of the description:
pages (See Attached) , as originally filed
pages _____ , filed with the demand
pages _____ , filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the writen sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

☒ the description, pages NONE

☒ the claims, Nos. NONE

☒ the drawings, sheets/~~fig~~ NONE

5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

***Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)	Claims	1-33	YES
	Claims	NONE	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-33	NO
Industrial Applicability (IA)	Claims	1-33	YES
	Claims	NONE	NO

2. citations and explanations (Rule 70.7)

Claims 1-3, 5-6, 7-10, 11-13, 15-16, 17-20, 21, 22-24 lack an inventive step under PCT Article 33(3) as being obvious over Bush et al. (US PAT: 5,539,452, hereinafter Bush) in view of Nakajima (JP401252087A).

Regarding claims 1, 11, 21, 22, Bush discloses video telephone system comprising: video input means (132) (fig. 1), a remote interface circuit (372) (fig. 5), a video output device (664) (fig. 2), an application specific integrated circuit (ASIC) connected to the video input means, to video output device and to remote interface device, the ASIC having: a video-in circuit connected to the video input device from one of the plurality of video signal generating devices (col. 4 lines 39-67, col. 5 lines 1-10), a memory circuit (172, 244) (fig. 1), data compression circuit (180) (fig. 1) means connected to the memory circuit to receive stored data and compress the stored data, video processing means (248) (fig. 1) connected to receive the outgoing compressed data and connected to the remote interface unit to transmit outgoing compressed data, video decompression means (520,712) (fig. 2)connected to video processing means to receive the incoming compressed data and configured to decompress and to transmit incoming compressed data to the memory circuit, video image output means (664) (fig. 2) connected to receive incoming stored data from the memory circuit and to transmit the incoming stored data to a display device (664) (figs. 1-2, col. 11 lines 14-67, col. 12 lines 1-67, col. 13 lines 1-67, col. 14 lines 1-67, col. 15 lines 1-18).

Bush differs from the claimed invention by not showing plurality of input devices and output devices.

However, Nakajima discloses picture displaying system which teaches plurality of input devices (1a,1b) and output devices (7a,7b) (fig. 1 see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Bush's system to provide for plurality of input devices and output devices as this would facilitate displaying abundant in presence in video conference as taught by Nakajima.

(Continued on Supplemental Sheet.)

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Continuation of: Boxes I - VIII

I. BASIS OF REPORT:

This report has been drawn on the basis of the description,
page(s) 1-9, as originally filed.
page(s) NONE, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the claims,
page(s) 10-17, as originally filed.
page(s) NONE, as amended under Article 19.
page(s) NONE, filed with the demand.
and additional amendments:
pages: 17/1, 17/2, filed with the letter of 23 August 2000

This report has been drawn on the basis of the drawings,
page(s) 1-7, as originally filed.
page(s) NONE, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the sequence listing part of the description:
page(s) NONE, as originally filed.
pages(s) NONE, filed with the demand.
and additional amendments:
NONE

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

Regarding claims 2-3, 5-6, 7-10, 12-13, 15-16, 17-20, 23-24, Bush further teaches the following: remote interface device (372) (fig. 5) includes a modem (col. 19 lines 49-55), memory circuit (112, 244) includes a memory structure and memory control circuit, video input means includes a video decoder circuit (500,520) (fig. 2), control register connected to video processing means to receive control signals therefrom and input configuration circuit to input control signals to cause input configuration circuit to operate to supply one of the plurality of video input signals (col. 5 lines 17-67, col. 6 lines 1-9), a decimation circuit (reads on 156) (fig. 3) which operatés to reduce the density of the output signal and is connected to buffer (172) (fig. 3) to store and transmit an output video (col. 12 lines 58-64), databus for interconnecting various devices (see figs 1-6), bus control circuit includes a bone interface circuit being configured to generate and supply the control signals (col. 6 lines 3-9), video processor means (248) includes a data processor, a memory control sequencer (col. 5 lines 17-19), a line buffer (288, 326) (fig. 1) being configured to receive incoming stored data from the memory control sequencer, an interpolator circuit (reads on 340) (fig. 1) connected to the line buffer to receive the video output signal and generate a an interpolated signal (col. 18 lines 36-64), a buffer (324) (fig. 1), a control register connected to the databus to receive control signaled (col. 6 lines 3-9), an encoder (368) (fig. 1) connected to the buffer to receive the interpolated video signal.

Bush differs from the claimed invention by not showing plurality of input devices and output devices.

However, Nakajima discloses picture displaying system which teaches plurality of input devices (1a,1b) and output devices (7a,7b) (fig. 1 see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Bush's system to provide for plurality of input devices and output devices as this would facilitate displaying images abundant in presence in video conference as taught by Nakajima.

Claims 4, 14, lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Aoki et al. (JP408307514A, hereinafter Aoki).

Regarding claims 4, 14, the combination does not teach that memory structure is a DRAM configured to receive and store data.

However, Aoki discloses communication equipment that teaches about use of DRAM (34) (fig. 1) to store data (fig. 1, see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for memory structure that is a DRAM configured to receive and store data as this would enable

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Continuation of: Boxes I - VIII

storing more data which results in economy of implementation.

Claim 25 lack an inventive step under PCT Article 33(3) as being obvious over Iwasaki (JP404150686A) in view of Shinoda (JP410065655A) and Bush,

Regarding claim 25, Iwasaki discloses a video telephone system video input means (10) comprising: an external analog video camera (12), an internal analog video camera (9), a video decoder (reads on 5) connected to the external video camera and the internal video camera, the video decoder configured for generating digital video signals, an internal digital video camera for generating digital video signals, a remote interface circuit (1) a memory device in (3,4), CODEC (3,4)and including high speed serial bus interface for sending and receiving digital video signals and including video out interf ace for outputting digital video signals, transmit and receive encoded video signals through the remote interface circuit (1)(fig. 1, see abstract).

Iwasaki differs from the claimed invention by not teaching the following: application specific integrated circuit (ASIC) configured for receiving, storing and moving digital video signals from the video input means, and configured for interfacing with the memory device, and configured for encoding and decoding the digital video signals in conformance with H.263 and configured to transmit and receive encoded video signals through the remote interface circuit.

However, Bush teaches use of ASIC in video telephone system (col. 4 lines 51-60) and Shinoda teaches encoding and decoding signals in conformity with H.263 standard (fig. 1, see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Iwasaki's system to provide for the following: application specific integrated circuit (ASIC) configured for receiving, storing and moving digital video signals from the video input means as this would provide a compact arrangement for effecting signal processing as taught by Bush, and configured for interfacing with the memory device, and configured for encoding and decoding the digital video signals in conformance with H.263 as this is a well known standard for coding/decoding of video signals to be conformed to enhance the application of the system.

Claims 26-27 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Murakami et al. (JP402094860A, hereinafter Murakami)

Regarding claims 26-27, the combination does not teach the following:external/internal analog video cameras compatible with NTSC or PAL formats.

However, Murakami discloses a picture processor which teaches NTSC or PAL compatible cameras (fig. 1, see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following:external/internal analog video cameras compatible with NTSC or PAL formats as these are well known formats for cameras to be conformed with to increase the functionality of the system.

Claims 28-29, 31 and 33 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Blocks (Delivery of Digital Video over IEEE 1394) and Severance (Linking computers and consumer electronics).

Regarding claims 28-29 and 31, the combination teaches video means comprising: a controller with a modem (2) and a telephone system in communication with the controller with the modem (see fig. 1 of Iwasaki); but it does not teach the following:IEEE-1394 compatible bus interface and digital video cameras connected to the IEEE-1394 high speed serial bus.

However, Blocks teaches A-1394 high speed bus for multimedia communication (see introduction) and Severance teaches A-1394 interface for connecting various devices including cameras that imply A-1394 compatible digital video camera.

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: A-1394 compatible bus interface and digital video cameras connected to the A-1394 high speed serial bus as this would provide an arrangement for signal processing based well known standard.

Claim 30 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Tamura (JP402039693A).

Regarding clam 30, the combination does not teach the following: video output means in communication with the

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Continuation of: Boxes I - VIII

video out interface, the video output means comprising: a video modulator configured for receiving digital video signals from the video out interface and convert the digital video signals to modulated analog video signals, a cable multiplexer in communication with the video modulator for multiplexing the modulated video signals, a television monitor connected to the cable multiplexer for receiving the multiplexed modulated analog video signals and configured to for displaying video images on one of a plurality of channels, video encoder for receiving digital video signals from the video out interface and transmitting analog video signals, and a television monitor connected to the video encoder for receiving the analog video signals and configured to displaying video images.

However, Tamura discloses a multifunction type video telephone system that teaches the following: video output means in communication with the video out interface, the video output means comprising: a video modulator configured for receiving digital video signals from the video out interface and convert the digital video signals to modulated analog video signals, a cable multiplexer in communication with the video modulator for multiplexing the modulated video signals, a television monitor connected to the cable multiplexer for receiving the multiplexed modulated analog video signals and configured to for displaying video images on one of a plurality of channels, video encoder for receiving digital video signals from the video out interface and transmitting analog video signals, and a television monitor connected to the video encoder for receiving the analog video signals and configured to displaying video images (fig. 1, see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following:video output means in communication with the video out interface, the video output means comprising: a video modulator configured for receiving digital video signals from the video out interface and convert the digital video signals to modulated analog video signals, a cable multiplexer in communication with the video modulator for multiplexing the modulated video signals, a television monitor connected to the cable multiplexer for receiving the multiplexed modulated analog video signals and configured to for displaying video images on one of a plurality of channels, video encoder for receiving digital video signals from the video out interface and transmitting analog video signals, and a television monitor connected to the video encoder for receiving the analog video signals and configured to displaying video images (fig. 1, see abstract) as this arrangement would provide multifunctionality for the system, thus reducing the cost of the system as taught by Tamura.

Claim 32 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Murakami.

Regarding claim 32, the combination does not teach the following: controller with a modem is selected from a group consisting of cable box, a set top box and a personal computer.

However, Murakami discloses a picture processor that teaches the following: controller with a modem is selected from a group consisting of cable box, a set top box and a personal computer (fig. 1, see abstract).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: controller with a modem is selected from a group consisting of cable box, a set top box and a personal computer as this would enable to use existing display like television for display of images, thus reducing the cost.

---------- NEW CITATIONS ----------
JP402094860 A (MURAKAMI et al.) 05 APRIL 1990 (see abstract)
JP402039693 A (TAMURA) 08 FEBRUARY 1990 (see abstract)
JP408307514 A (AOKI) 22 NOVEMBER 1996 (FIG. 1, see abstract).
JP404150686 A (IWASAKI) 25 MAY 1992 (FIG. 1, see abstract),
JP410065655 A (SHIONDA) 06 MARCH 1998 (FIG. 1, see abstract),
WO 98/19244 A1 (ZARN et al.) 07 MAY 1998 (FIG. 1, see abstract),
SEVERANCE, LINKING COMPUTERS AND CONSUMER ELECTRONICS, FEBRUARY 1997, SEE abstract,
BLOKS, DELIVERING DIGITAL VIDEO OVER IEEE 1394, APRIL 1997, SEE Introduction.

25. A video conferencing system comprising:

video input means, comprising:

an external analog video camera;

an internal analog video camera;

a video decoder connected to said external analog video camera and said internal analog video camera, said video decoder configured for generating digital video signals; and

an internal digital video camera for generating digital video signals;

a remote interface circuit;

a memory device; and

application specific integrated circuit (ASIC) configured for receiving, storing and moving digital video signals from said video input means, and configured for interfacing with said memory device, and configured for encoding and decoding said digital video signals in conformance with H.263, and configured to transmit and receive encoded video signals through said remote interface circuit, and including a high speed serial bus interface for sending and receiving digital video signals and including a video out interface for outputting digital video signals.

26. The video conferencing system of claim 25, wherein said external analog video camera is compatible with NTSC or PAL formats.

27. The video conferencing system of claim 25, wherein said internal analog video camera is compatible with NTSC or PAL formats.

28. The video conferencing system of claim 25, wherein said high speed serial bus interface is IEEE-1394 compatible.

29. The video conferencing system of claim 28, further comprising an IEEE-1394 digital video camera connected to said IEEE-1394 high speed serial bus for sending and receiving digital video signals.

30. The video conferencing system of claim 25, further comprising a video output means in communication with said video out interface, said video output means comprising:

a video modulator configured for receiving digital video signals from said video out interface and convert said digital video signals to modulated analog video signals;

a cable multiplexer in communication with said video modulator for multiplexing said modulated analog video signals;

a television monitor connected to said cable multiplexer for receiving said multiplexed, modulated analog video signals and configured for displaying video images on one of a plurality of channels;

a video encoder for receiving digital video signals from said video out interface and transmitting analog video signals; and

a television monitor connected to said video encoder for receiving said analog video signals and configured for displaying video images.

31. The video conferencing system of claim 25, further comprising a video means in communication with said high speed serial bus, said video means comprising:

a controller with a modem; and

a telephone system in communication with said controller with a modem.

32. The video conferencing system of claim 31, wherein said controller with a modem is selected from the group consisting of a cable box, a set top box and a personal computer.

33. The video conferencing system of claim 31, further comprising a digital video camera in communication with said high speed serial data bus and said controller with a modem.

PATENT COOPERATION TREATY

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NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing *(day/month/year)*	07 DEC 2000

Applicant's or agent's file reference	IMPORTANT NOTIFICATION
3750.1PCT	

International application No.	International filing date *(day/month/year)*	Priority Date *(day/month/year)*
PCT/US99/16995	27 JULY 1999	30 JULY 1998

Applicant
SORENSON VISION, INC.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

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